

RAIL ATLAS EUROPE



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Zeichenerklärung

Eisenbahnen

zweigleisige Strecke 1435 mm / Streckennummer	
eingleisig 1435 mm / Streckennummer	
Schmalspurbahn	
Breitspur 1520, 1600, oder 1668 mm dto. eingleisig	
außer Betrieb	
Zahnradbahn	
Privatbahn	
Museumsbetrieb / Draisinen	
im Bau / geplant	

Elektrischer Betrieb

Wechselstrom 15 kV 16,7 Hz (Staatsbahn / Privatbahn)	
Wechselstrom 25 kV 50 Hz	
Gleichstrom 600 - 1500 V (Staatsbahn / Privatbahn)	
Gleichstrom 3000 V (Staatsbahn / Privatbahn)	
Systemwechsel	

Stationen

Bahnhof, Haltepunkt, Haltestelle	
Rangierbahnhof, Zugbildungsbahnhof	
Umschlagbahnhof (Container)	
Umschlagbahnhof (Huckepack)	
Logistikzentrum	
Holzverladung	
Umspuranlage	
Werkstätte, Depot	

Sonstiges

Staatsgrenze	
Steinbruch, Bergwerk	
Fähre	
Straßenbahn	
Standseilbahn	
Bewegliche Brücke	
U-Bahn, Metro	
Flughafen mit IATA-Code	
Eisenbahn-Museum	
TEN-Achse	
PAN-Achse	

légende

chemins de fer

double voie 1435 mm / numéro de ligne	
voie unique 1435 mm	
chemin de fer à voie étroite	
ligne à écartement large: 1520, 1600, 1668 mm dto., voie unique	
ligne non exploitée	
chemin de fer à crémaillère	
chemin de fer privé	
chemin de fer touristique / draisine	
ligne en construction / projetée	

traction électrique

courant monophasé 15 kV 16,7 Hz (chemin de fer d'Etat / chemin de fer privé)	
courant monophasé 25 kV 50 Hz	
courant continu 600 V - 1500 V (chemin de fer d'Etat / chemin de fer privé)	
courant continu 3000 V (chemin de fer d'Etat / chemin de fer privé)	
limite système	

gares

gare, point d'arrêt, halte	
gare de triage	
gare intermodale (container)	
gare intermodale (transport combiné rail-route)	
gare marchandises	
chargement de bois	
installation de chargement d'écartement	
atelier, dépôt	

renseignements divers

frontière nationale	
carrière, mine	
bac	
tramway	
funiculaire	
pont amovible	
métropolitain, métro	
aéroport avec code IATA	
musée de chemin de fer	
TEN essieu	
PAN essieu	

legenda

ferrovie

doppio binario 1435 mm / numero di linea	
binario semplice 1435 mm	
scartamento ridotto	
linea a grande scartamento dto., binario semplice	
linea chiusa al traffico	
ferrovia a cremagliera	
ferrovia concessa	
esercizio storico / draisina	
linea in costruzione / progettata	

trazione elettrica

corrente alternata 15 kV 16,7 Hz (ferrovia dello stato / concessa)	
corrente alternata 25 kV 50 Hz	
corrente continua 600 - 1500 V (ferrovia dello stato / concessa)	
corrente continua 3000 V (ferrovia dello stato / concessa)	
cambiamento di tensione	

stazioni

stazione / fermata	
smistamento, fascio di binari	
traffico intermodale (container)	
trasporto combinato strada-rotaia	
stazione logistica, railport	
impianto di carico di legno	
impianto per il cambio dello scartamento	
officina, deposito	

altri segni

confine di stato	
cava di pietra / miniera	
traghetto	
tranvia	
funicolare	
ponte rimovibili	
metropolitana urbana, metro	
aeroporto con codice IATA	
museo	
asse transeuropea	
corridoio paneuropeo	

key

railways

double-track 1435 mm / official line number	
single track 1435 mm / line number	
narrow gauge	
broad-gauge track 1520, 1600 or 1668 mm dto., single track	
line not in use	
rack railway	
private railway, not in use by state	
touristic line / line not in use / track	
line under construction / planned	

electric operated lines

alternating current 15 kV 16,7 Hz (state railway / private railway)	
alternating current 25 kV 50 Hz	
direct current 750 - 1500 V (state railway / private railway)	
direct current 3000 V (state railway / private railway)	
change of voltage	

stations

station, halt, stop	
marshalling yard	
intermodal station (container terminal)	
combined rail-road transport	
logistic station	
station with timber loading	
gauge conversion	
workshop, motive power depot	

special signs

national border	
quarry / coal mine	
ferry, railway ferry	
tramway	
cableway	
moveable railway bridge	
underground, municipal metro	
airport with IATA code	
railway museum	
TEN-T-axe	
PAN-axe	

- Navigation with the future Galileo satellite system
- Energy (TEN-Energy)
- Telecommunications (eTEN)
- Information Systems (GIS)

The European Council approved the first 14 TEN-T projects in 1994. Guidelines were established for TEN-T in 1996 (Decision No 1692/96/EC of 23 July 1996, amended by Decision No 1346/2001/EC of 22 May 2001 and Decision No 884/2004/EC of 29 April 2004). Since 2001 TEN-T includes not only all modes of transport, but also traffic management systems. By 2020 a rail network of about 94,000km, an inland waterway network of approximately 11,250km and a road network of around 89,500km will have been created.

Implementation of the TEN-T projects proved very difficult, and by 2003 only about a third of the planned transport network was completed. The guidelines were amended in 2004, and the TEN-T projects should now be more focused and coordinated across Europe. Since 2004 the new list includes 30 priority transport axes and projects, as numbered below:

- 1 Rail axis: Berlin-Verona/
Milano-Bologna-Napoli-Messina-Palermo
- 2 High-speed axis: Paris-Brussels/
Brussels-Cologne-Amsterdam-London
- 3 High-speed railway axis in south-west Europe:
Paris-Madrid
- 4 High-speed axis: east Paris-eastern France-Frankfurt/
Stuttgart-Munich
- 5 Betuweroute:
Maastricht-Kijfhoek-Zevenaar-Emmerich-Oberhausen
- 6 Railway axis: Lyon-Trieste-Divaca/Koper-Ljubljana-
Budapest-Ukrainian border at Chop
- 7 Paris-Bratislava rail corridor
- 8 Multimodal axis: Portugal/Spain-rest of Europe:
Portugal-Spain-France
- 9 Rail axis Ireland: Cork-Dublin-Belfast-Stranraer
(completed 2001)
- 10 Connection to Milan Malpensa Airport (completed 2001)
- 11 Öresund Land Bridge
- 12 Rail/road axis: Nordic Triangle (various routes)
- 14 West Coast Main Line: Edinburgh/Glasgow-Carlisle-
(Manchester or Liverpool)-Crewe-(Birmingham)
-Rugby-London
- 15 Galileo satellite navigation
- 16 Railfreight axis: Sines/Algeciras-Madrid-Paris
- 17 Rail axis: Paris-Strasbourg-Stuttgart-Munich-Vienna-
Bratislava/Budapest
- 18 Inland waterway, Rhine-Danube: Rhine/
Meuse-Main-Danube
- 19 High-speed axis (interoperable) in Iberian peninsula

- 20 Rail axis: Fehmarn Belt
- 21 'Motorways of the Sea', including Nord-Ostsee-Kanal
- 22 Rail axis: Athens-Sofia-Budapest-Vienna-Prague-
Nuremberg/Dresden
- 23 Rail axis: Gdansk-Warsaw-Brno/Bratislava-Vienna
- 24 Rail axis: Lyon/Genoa-Basel-Duisburg-Rotterdam/Antwerp
- 25 Motorway axis: Gdansk-Vienna
- 26 Rail/road axis: Ireland/United Kingdom/continental Europe
- 27 'Baltic rail axis': Warsaw-Kaunas-Riga-Tallinn-Helsinki
- 28 'Eurocaprail' rail axis: Brussels-Luxembourg-Strasbourg
- 29 Rail axis: Ionian-Adriatic intermodal corridor
- 30 Inland waterway: Seine-Schelde

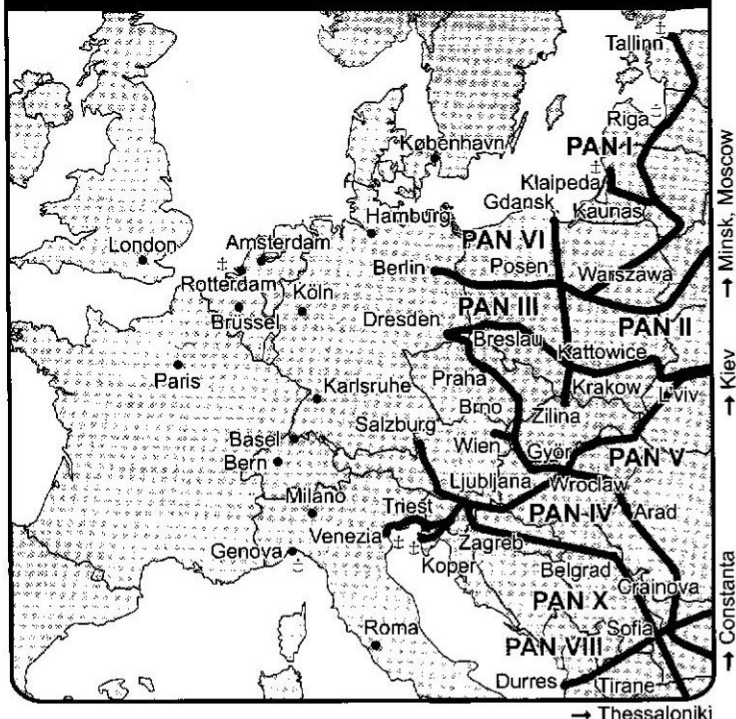
The EU member states have to finance their own country's TEN-T projects themselves, so implementation is highly dependent on the financial strength of the individual countries, although the EU budget provides additional resources. National investment through the European Regional Development Fund (ERDF) and the Cohesion Fund can be co-financed as part of the European transport network. The European Investment Bank and the European Investment Fund can also assist with loans and finance guarantees.

PAN corridors

In addition to the TEN-T projects, pan-European transport corridors were defined by the European Transport Conferences in Crete in 1994 and Helsinki in 1997. Ten major routes connected Europe from the Atlantic to the Volga and from Scandinavia to the Mediterranean. The ten PAN corridors are designated by Roman numerals:

- I Helsinki-Tallinn-Riga-Kaunas-Klaipeda-Warsaw
- II Berlin-Poznan-Warsaw-Brest-Minsk-Smolensk-Moscow
-Nizhny Novgorod
- III Dresden-Milkowice-Wroclaw
(Breslau)-Katowice-Krakow-Lviv-Kiev
- IV Dresden-Prague-Brno/Vienna/
Bratislava-Győr-Budapest-Arad-Craiova-Sofia-Plovdiv-
Svilengrad-Edirne-Istanbul
- V Venecia-Trieste-Koper-Ljubljana-Maribor-Budapest
-Uzhgorod-Lviv-Kiev
- VI Gdansk-Grudziadz-Torun-Zebrzydowice-Zilina
- VII Germany-Austria-Bratislava-Győr-Croatia-Serbia-Rus
-Lom-Constanta
- VIII Durres-Tirana-Skopje-Bitola-Sofia-Dimitrovgrad-Burgas
- IX Helsinki-Wyborg-St Petersburg-Pskov-Kiev-Ljubasewka-
Chisinau-Bucharest-Ruse-Veliko Tarnovo-Kazanlak-Stara
Agora-Dimitrovgrad-Haskovo-Charmanli-Svilengrad-
Alexandroupolis
- X Salzburg-Villach-Ljubljana-Zagreb-Beograd-Nis-Skopje
-Veles-Thessaloniki

PAN corridors



- 5 Gdynia-Katowice-Ostrava/Zilina-Vienna-Trieste/Koper
- 6 Almeria-Valencia/Madrid-Zaragoza/Barcelona-Marseille-Lyon-Turin-Udine-Trieste/Koper-Ljubljana-Budapest-Zahony (Hungary/Ukraine border)
- 7 Prague-Vienna/Bratislava-Budapest-Athens/Constanta
- 8 Bremerhaven/Rotterdam/Antwerp-Aachen/Berlin-Warsaw-Terespol (Poland/Belarus border)/Kaunas
- 9 Prague-Horní Lidec-Zilina-Kosice-Crerna and Tisou (Slovakia/Ukraine border)

The railfreight corridors partly coincide with the EU-defined Trans-European Networks TEN-T and the PAN corridors. This is especially true for the first of the nine corridors, which corresponds closely to the TEN 24 axis, which, as the 'Blue Banana' urbanisation corridor from North West England to northern Italy, is the strongest economic area in central Europe.

But it will be many years before these freight axes are fully operational. Already the number of free paths for freight trains is determined by the tight timing of passenger trains and long-distance traffic. During the night hours are there sufficient slots for freight, such as the Middle Rhine Valley (Corridor I = TEN 24). However, there is also the high risk of noise pollution on the historic north-south route used by freight trains, which passes through almost all the towns in the Middle Rhine Valley, while the fast-moving passenger trains on the high-speed line travel away from the towns by the Westerwald. This high-speed line (also part of TEN-T) is completely unsuitable for freight trains because of the steep track alignment, and its use is therefore not permitted.

Hinterland transport to the western ports (Zeebrugge, Antwerp, Rotterdam and Amsterdam, the 'ZARA' ports) faces a similar situation to that of the ports of the north and east. The north-south axis from the

ERTMS corridors

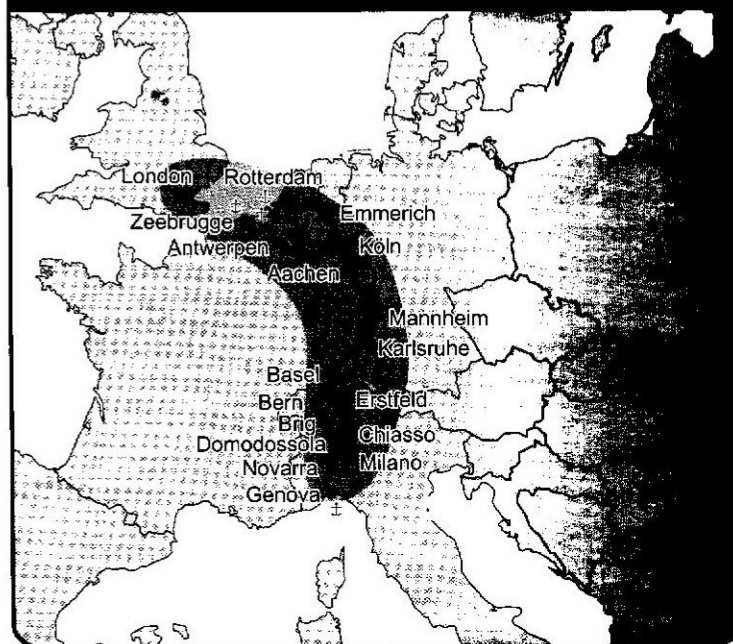
The objective of the European Commission is to replace more than 20 different national train control systems in Europe by the European Rail Traffic Management System (ERTMS). While this system is already successfully used on many high-speed lines and is very successful worldwide, interoperable freight corridors are still not available in some countries. To increase the efficiency and sustainability of freight transport in the EU, six corridors (A-F) have been proposed, which are to be equipped with ERTMS with TEN-T funding.

Freight corridors

The European Commission, which aims to make European rail transport competitive under the four railway directives, has added to Regulation 913/2010, for a competitive European railfreight network, other aims that oblige the member states, and in particular their infrastructure management, to act together. **Nine railfreight corridors were defined, to be set up between 2013 and 2015:**

- 1 Zeebrugge-Antwerp/Rotterdam/Aachen-Cologne-Mannheim-Basel-Milan-Genova
- 2 Rotterdam-Antwerp-Luxembourg-Metz-Dijon-Lyon/Basel
- 3 Stockholm-Copenhagen-Hamburg-Munich-Innsbruck-Verona-Palermo
- 4 Sines-Lisbon/Leixoes-Madrid-San Sebastian-Bordeaux-Paris/Le Havre/Metz

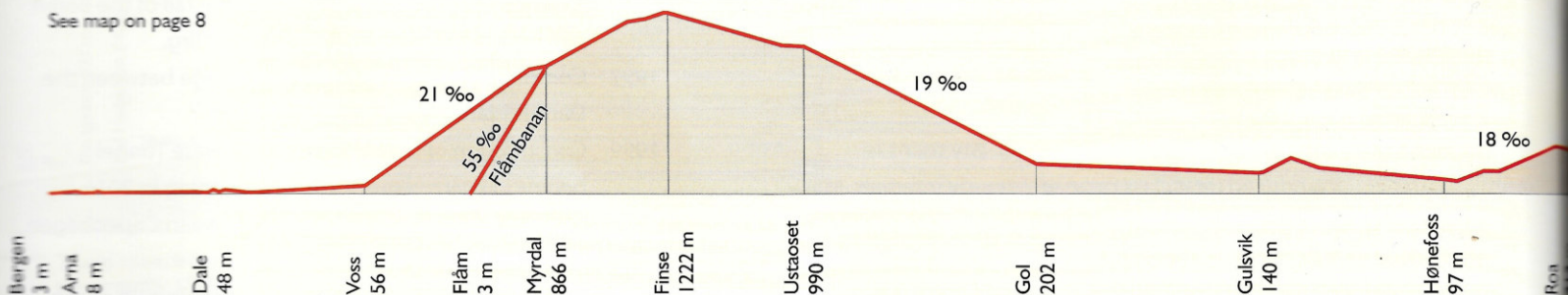
Corridor 1 and the Blue Banana



Bergen Railway / Bergensbanan

Length 471,25 km

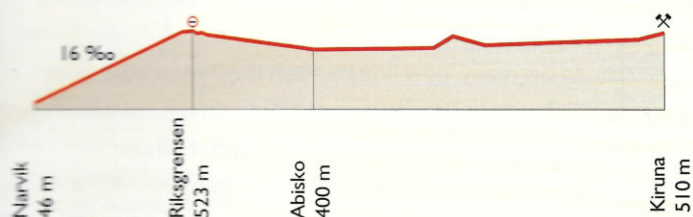
See map on page 8



Iron ore line Kiruna - Narvik / Ofotbanen / Malmбанан

Length Narvik - Luleå 473 km

Length Narvik - Kiruna 168 km



Norwegian
Sea



Old line, built for strategic reasons, discontinued in 1988 across bridge at Norddal (140 m long and 40 m high). The old route may be recommissioned to increase capacity.

New interchange station at Djupvik planned / under construction

Malmбанан / Ofotbanen:
max permissible train length 300 m
max permissible axle load 30 t





Iron ore line (Malmabanen):
max permissible train length 750 m
max permissible axle load 30 t
(Track Class G)

Norrbotten line extension
to Luleå planned / delayed
until 2025

SWEDEN

FINLAND

FINLAND

Gulf
of
Bothnia

Brücke

Sundsvall

Karlshamn
Ringsjö



Iron ore line (Malmöbanan):
max permissible train length 750 m
max permissible axle load 30 t
(Track Class G)

Norrbotten line extension
to Luleå planned / delayed
until 2025



A

Kellosäkä

3

B

C

Murmansk

D

Kemijärvi

Louhi

White
Sea

Sofporog

Pyaozero

Kouzema

Kem

FINLAND
SUOMI



RUSSIA
ROSSIJA



Belomorsk

Yushkozero

Ammänsaari

Kostomuksha

Vartius

Ledmozero

Kochikoma

Vacha

Paltamo

Kontiomäki

KAJ

Kajaani

Vuokatti

Olanmäki

Transtech Oy

Murtoimäki

Talvivaara

Nurmes

Lendery

Brusnichnaya

Maasejärvi

Pyhäsalmi

Pyhäkumpu

Iisalmi

Lieksa

Pankakoski

Porosozero

Sillinjärvi

KUPLO

Kuplo

Iisvesi

Suonenjoki

Aänekoski

Varkaus

Uimahaju

Ilomantsi

JOE

Joensuu

Säkäniemi

Vartsila

Matkaselkä

Yanisyarvi

A

Tampere

Kouvola

Pieksämäki

B

13

C

Kouvola

Jyväskylä

D

Uusima

2

Kanta-Häme

3

4

Karjala

Norwegian Sea

NORWAY



Loops of the
Flåm Railway
near Myrdal

Skagerrak

Vestfoldbanen partly
two-tracked, double-track
for entire line under
construction





DJK = Dansk Jernbaneklub (Maribo - Bandholm)
LS = Lokalbaneln A/S
MHJ = Maribo-Høstede Veteranjernbane
MD = Midtjyske Jernbaner A/S
NJ = Nordjyske Jernbaner A/S
RT = Regionstog A/S
SFVJ = Syd Fynske Veteranjernbane
VHJ = Veteranbanen Haderslev - Vojens
WVJ = Vestbanen A/S







A

Haapajärvi

7

Siltinjärvi

B

Joensuu

C

Säkämäki

Varsila

D

FINLAND
SUOMI

Airport line from
Vantaankoski to
Hiekkaharju under
construction for
ca. 2015

HELSINKI
HELSINGFORS

Project Rail Baltica:
Projected Railway line (TEN 27) from
Warsaw via Kaunas and Riga to Tallinn
with connection to Helsinki by ferry or
tunnel.
(Agreed in Wismar 2001, open ca.
2023). Entire length ca. 940 km normal
gauge (1435 mm), aimed top speed
250 km/h.

→ Rostock
→ Gdynia

TALLINN

ESTONIA

TEN 27
PAN I

RUSSIA



Lake Peipus

A

B

Riga

15

Riga

C

Riga

D



ATLANTIC OCEAN

Outer Hebrides
Uist

Isles of Lewis

Isle of Skye

Isle of Mull

Jura

Islay

North Channel

Holy Island

UNITED KINGDOM

IRISH SEA

NORTHERN IRELAND

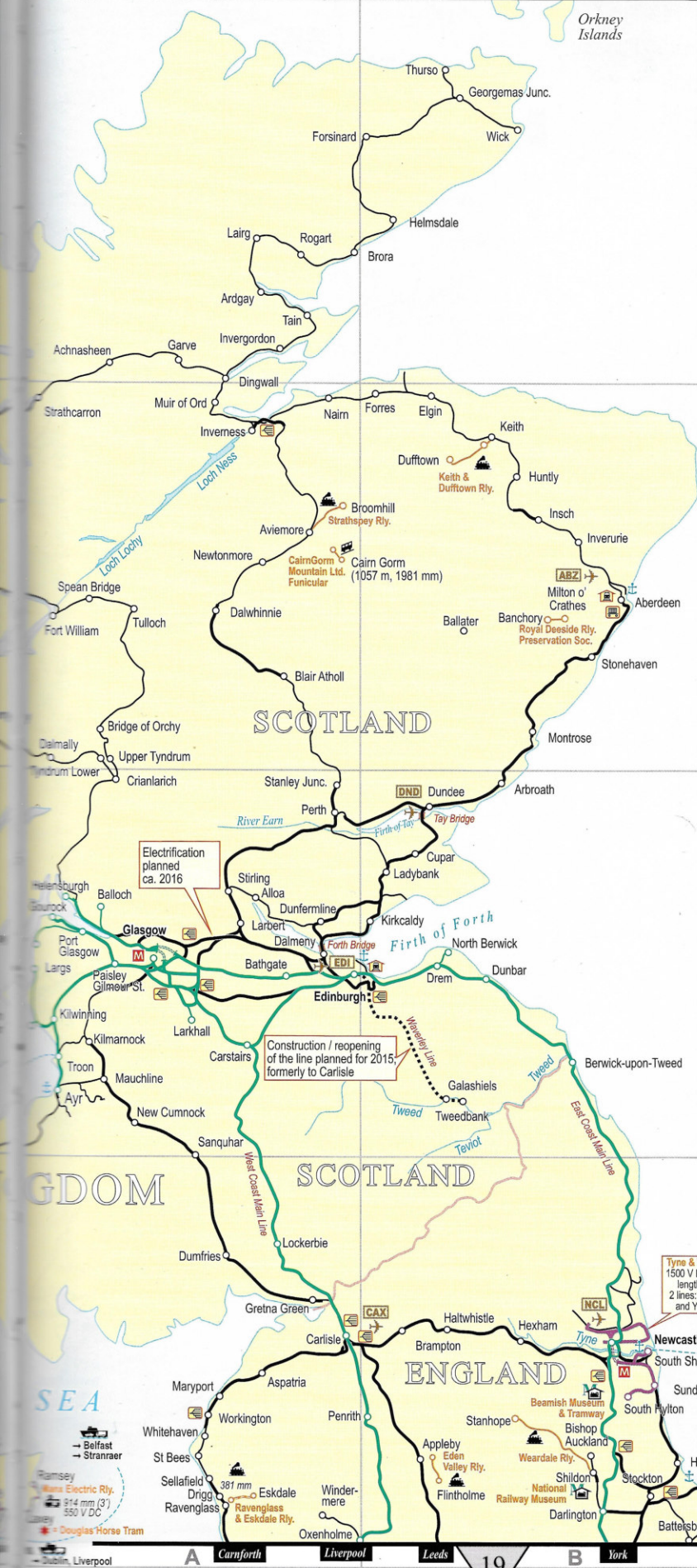
IRELAND
EIRE

A

B

C

D



NORTH SEA

GDOM

SCOTLAND

ENGLAND

SEA

Belfast
StranraerGreat North Road
114 mm (31)
550 V DC

Douglas Horse Tram

Dublin, Liverpool

A Carnforth

Liverpool

Leeds

19

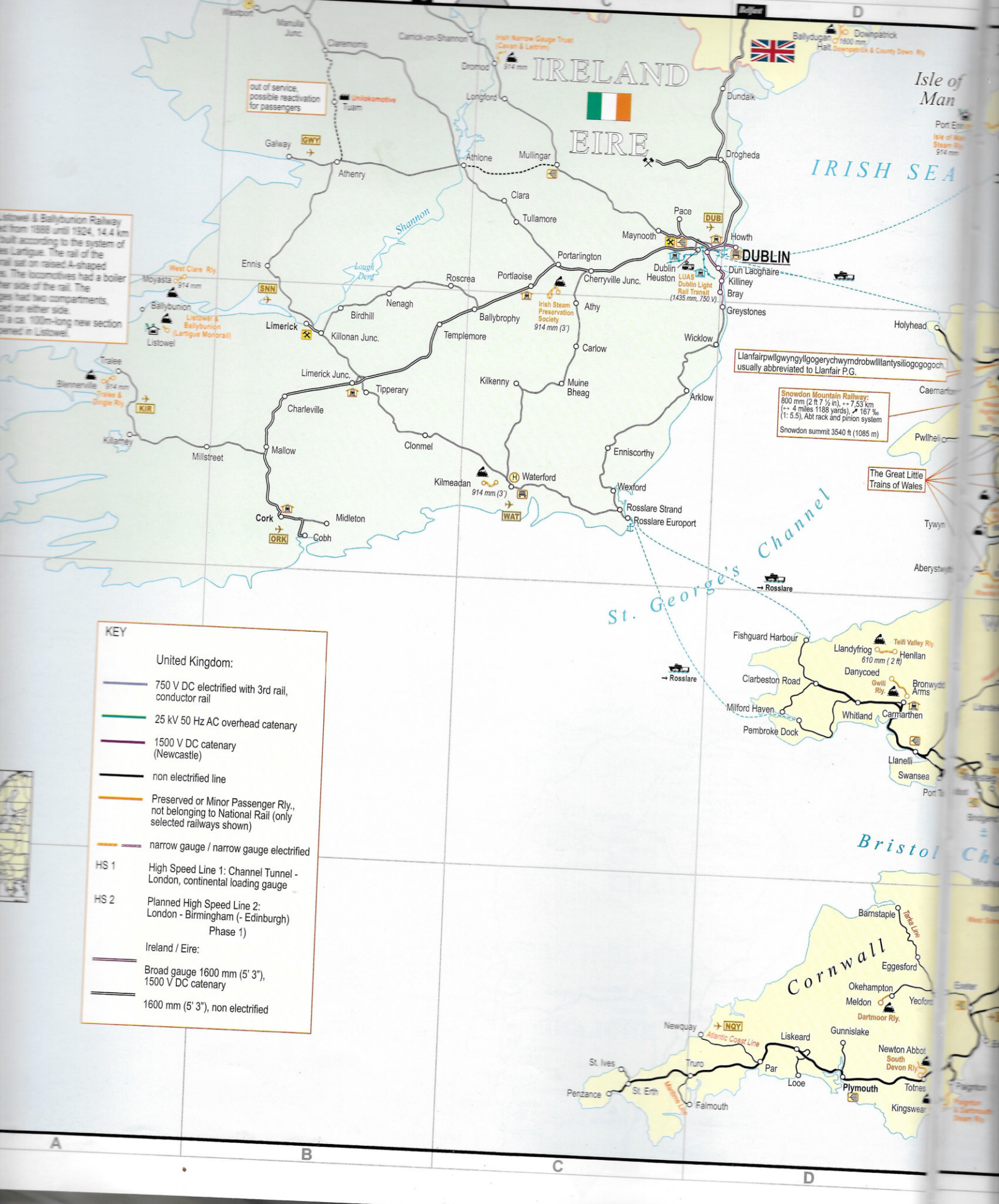
B York

Whitby

C

D

Orkney
IslandsThurso
Georgemas Junc.Forsinard
WickLairg
Rogart
Brora
HelmsdaleArdgay
TainAchnasheen
Garve
InvergordonStrathcarron
Muir of Ord
InvernessNairn
Forres
ElginKeith
HuntlyDufftown
Keith & Dufftown Rly.Broomhill
Strathpey Rly.Aviemore
Cairn Gorm
Mountain Ltd.
FunicularNewtonmore
Cairn Gorm
(1057 m, 1981 mm)Dalwhinnie
BallaterBlair Atholl
BanchoryStanley Junc.
PerthDundee
ArbroathStirling
Alloa
DunfermlineGlasgow
Paisley
Gillies St.Kilwinning
Kilmarnock
TroonMauchline
New CumnockSanquhar
LockerbieGretna Green
CarlisleBrampton
HexhamHaltwhistle
Newcastle-upon-TyneSouth Shields
SunderlandSouth Hylton
HartlepoolStockton
SaltburnBattersby
DarlingtonShildon
National
Railway MuseumFlintholme
Eden Valley Rly.Appley
Wardale Rly.Oxenholme
Ravenglass & Eskdale Rly.Tyne & Wear Metro
1500 V DC catenary,
length 74.5 km
2 lines: Green Line
and Yellow Line→ Bergen
→ Stavanger
→ Göteborg→ Esbjerg
→ Amsterdam



out of service,
possible reactivation
for passengers

Listowel & Ballybunion Railway
closed from 1888 until 1924, 14.4 km
built according to the system of
as Lantigue. The rail of the
rail set on raised A-shaped
side of the rail. The
locomotives had a boiler
on either side.
It is a ca. 100m-long new section
opened in Listowel.

Llanfairpwllgwyngyllgogerychwyrndrobwlilanantysillogogoch
usually abbreviated to Llanfair P.G.

Snowdon Mountain Railway:
800 mm (2 ft 7 1/2 in), +- 7.53 km
(+- 4 miles 1188 yards), 167 ‰
(1: 5.5), Abt rack and pinion system
Snowdon summit 3540 ft (1085 m)

The Great Little
Trains of Wales

KEY

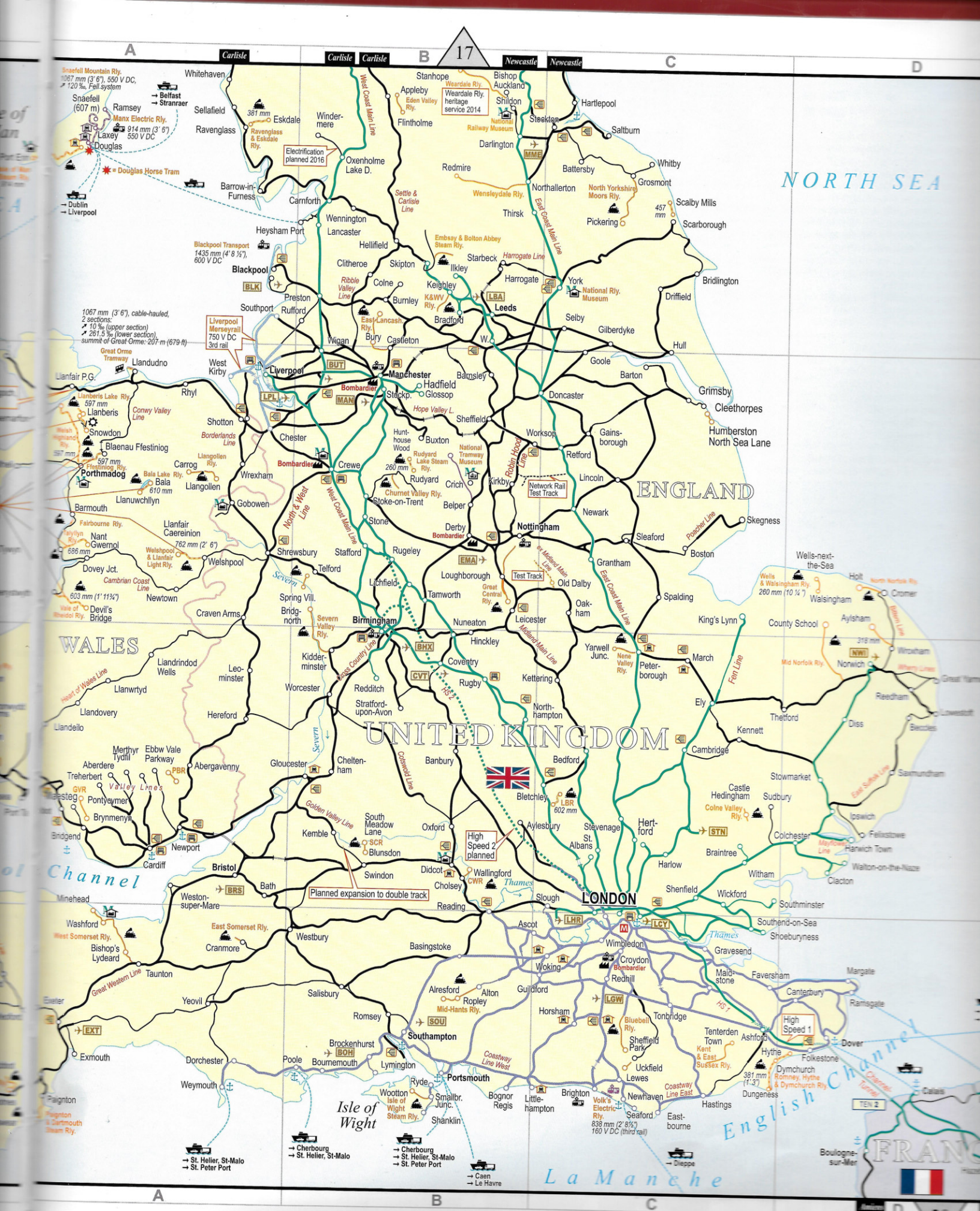
United Kingdom:

- 750 V DC electrified with 3rd rail,
conductor rail
- 25 kV 50 Hz AC overhead catenary
- 1500 V DC catenary
(Newcastle)
- non electrified line
- Preserved or Minor Passenger Rly.,
not belonging to National Rail (only
selected railways shown)
- narrow gauge / narrow gauge electrified

- HS 1 High Speed Line 1: Channel Tunnel -
London, continental loading gauge
- HS 2 Planned High Speed Line 2:
London - Birmingham (- Edinburgh)
Phase 1)

Ireland / Eire:

- Broad gauge 1600 mm (5' 3"),
1500 V DC catenary
- 1600 mm (5' 3"), non electrified



A

B

C

D

17

NORTH SEA

ENGLAND

WALES

UNITED KINGDOM



Channel

LONDON

Isle of Wight

English Channel

La Manche

FRANCE



→ St. Helier, St-Malo
→ St. Peter Port

→ Cherbourg
→ St. Helier, St-Malo

→ Cherbourg
→ St. Helier, St-Malo
→ St. Peter Port

→ Caen
→ Le Havre

→ Dieppe

Boulogne-sur-Mer

kum-Bersenbrücker Eisenbahn GmbH
 N Eisenbahn AG
 rheimer Eisenbahn AG
 choller Eisenbahngesellschaft mbH
 kumer Kleinbahn- und Dampfschiffahrt GmbH
 men-Thedinghauser Eisenbahn GmbH
 enbahninfrastukturgesellschaft Aurich-Emden GmbH
 sländische Eisenbahn GmbH
 enbahnen und Verkehrsbetriebe Elbe-Weser GmbH
 utscher Eisenbahn-Verein e.V.
 imenhorst-Harpstedter Eisenbahn GmbH
 utsche Regialeisenbahn GmbH
 sauer Verkehrs- und Eisenbahngesellschaft mbH
 esoyther Eisenbahngesellschaft mbH
 is Netz GmbH
 rge-Vegesacker Eisenbahn Gesellschaft mbH
 rzer Schmalspurbahnen GmbH
 rbarimier Eisenbahn AG
 eutsche Eisenbahngesellschaft Niebüll GmbH
 iestBahn GmbH
 hannoversche Eisenbahn AG
 gio Infra Gesellschaft mbH
 gio Infra Nord-Ost GmbH
 gionalverkehr Ruhr-Lippe GmbH
 gionalverkehr Münsterland GmbH
 edomer Bäderbahn GmbH
 ahrsgesellschaft Landkreis Osnabrück
 ahrsbetriebe Grafschaft Hoya GmbH
 den-Walsroder Eisenbahn GmbH
 stfälische Landes-Eisenbahn GmbH

DJK = Dansk Jernbane Klub
 RT = Regionstog A/S
 VHV = Veteranbanen Haderslev - Vojens
 VNJ = Vestbanen A/S

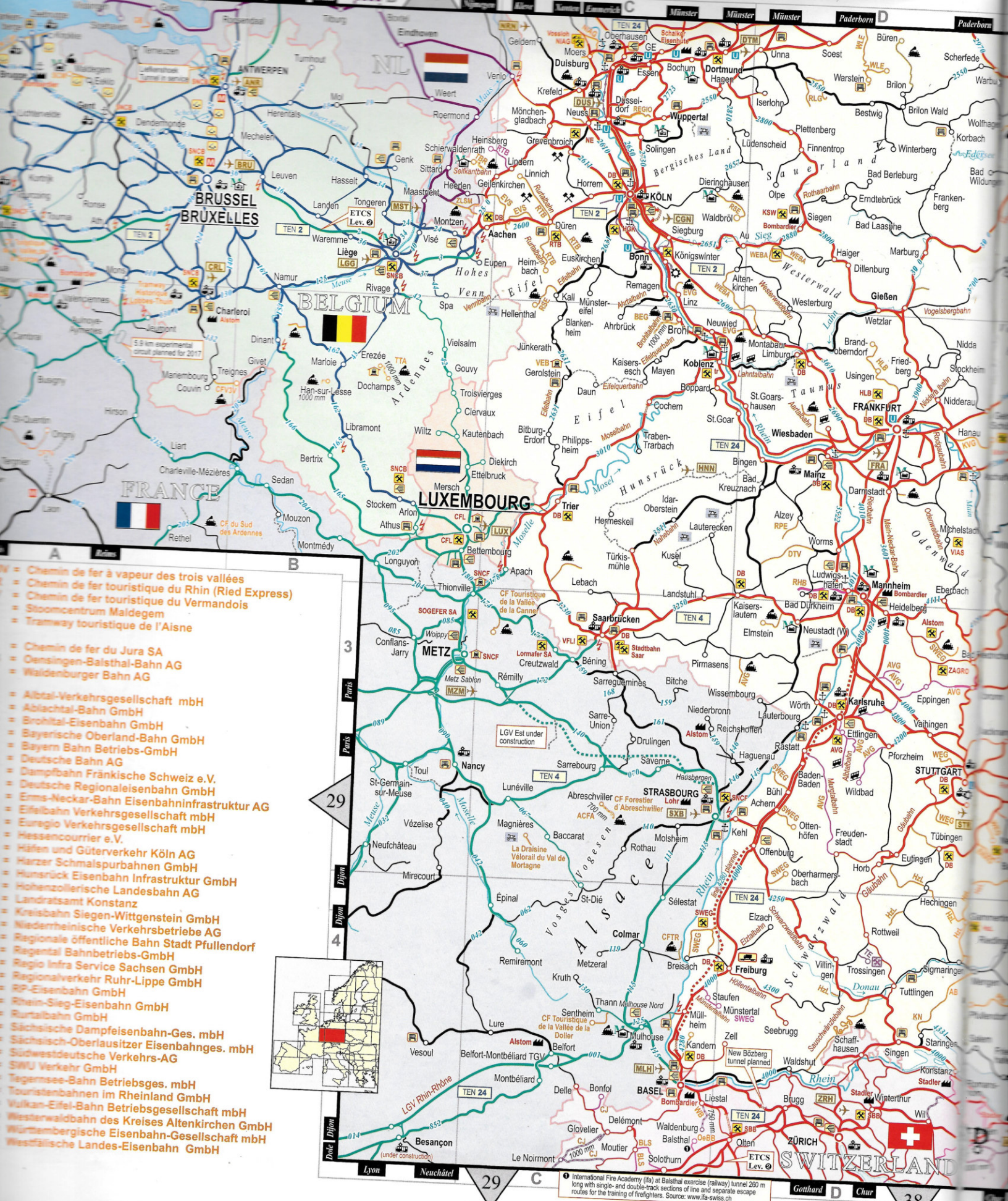
N O R T H S E A

ingen Railport
 onnelheidslijn
 kum Buurt Spoorweg
 umspoorlijn S.T.A.R. (Stichting Stadskanaal Rail)
 ntram Hoorn - Medemblik



OB = Oberhausen GE = Gelsenkirchen BO = Bochum





- Chemin de fer à vapeur des trois vallées
- Chemin de fer touristique du Rhin (Ried Express)
- Chemin de fer touristique du Vermandois
- Stoomcentrum Maldegem
- Tramway touristique de l'Aisne
- Chemin de fer du Jura SA
- Oensingen-Balsthal-Bahn AG
- Waldenburger Bahn AG
- Albtal-Verkehrsgesellschaft mbH
- Ablachtal-Bahn GmbH
- Brohlthal-Eisenbahn GmbH
- Bayerische Oberland-Bahn GmbH
- Bayern Bahn Betriebs-GmbH
- Deutsche Bahn AG
- Dampfbahn Fränkische Schweiz e.V.
- Deutsche Regionaleisenbahn GmbH
- Erms-Neckar-Bahn Eisenbahninfrastruktur AG
- Eifelbahn Verkehrsgesellschaft mbH
- Euregio Verkehrsgesellschaft mbH
- Hessencourrier e.V.
- Häfen und Güterverkehr Köln AG
- Harzer Schmalspurbahnen GmbH
- Hunsrück Eisenbahn Infrastruktur GmbH
- Hohenzollerische Landesbahn AG
- Landratsamt Konstanz
- Kreisbahn Siegen-Wittgenstein GmbH
- Niederrheinische Verkehrsbetriebe AG
- Regionale öffentliche Bahn Stadt Pfullendorf
- Regental Bahnbetriebs-GmbH
- Regio Infra Service Sachsen GmbH
- Regionalverkehr Ruhr-Lippe GmbH
- RP-Eisenbahn GmbH
- Rhein-Sieg-Eisenbahn GmbH
- Rurtalbahn GmbH
- Sächsische Dampfeisenbahn-Ges. mbH
- Sächsische Oberlausitzer Eisenbahnges. mbH
- Südwestdeutsche Verkehrs-AG
- SWU Verkehr GmbH
- Tegernsee-Bahn Betriebsges. mbH
- Touristenbahnen im Rheinland GmbH
- Vulkan-Eifel-Bahn Betriebsgesellschaft mbH
- Westerwaldbahn des Kreises Altenkirchen GmbH
- Württembergische Eisenbahn-Gesellschaft mbH
- Westfälische Landes-Eisenbahn GmbH

International Fire Academy (Ifa) at Balsthal exercise (railway) tunnel 280 m long with single- and double-track sections of line and separate escape routes for the training of firefighters. Source: www.ifa-swiss.ch

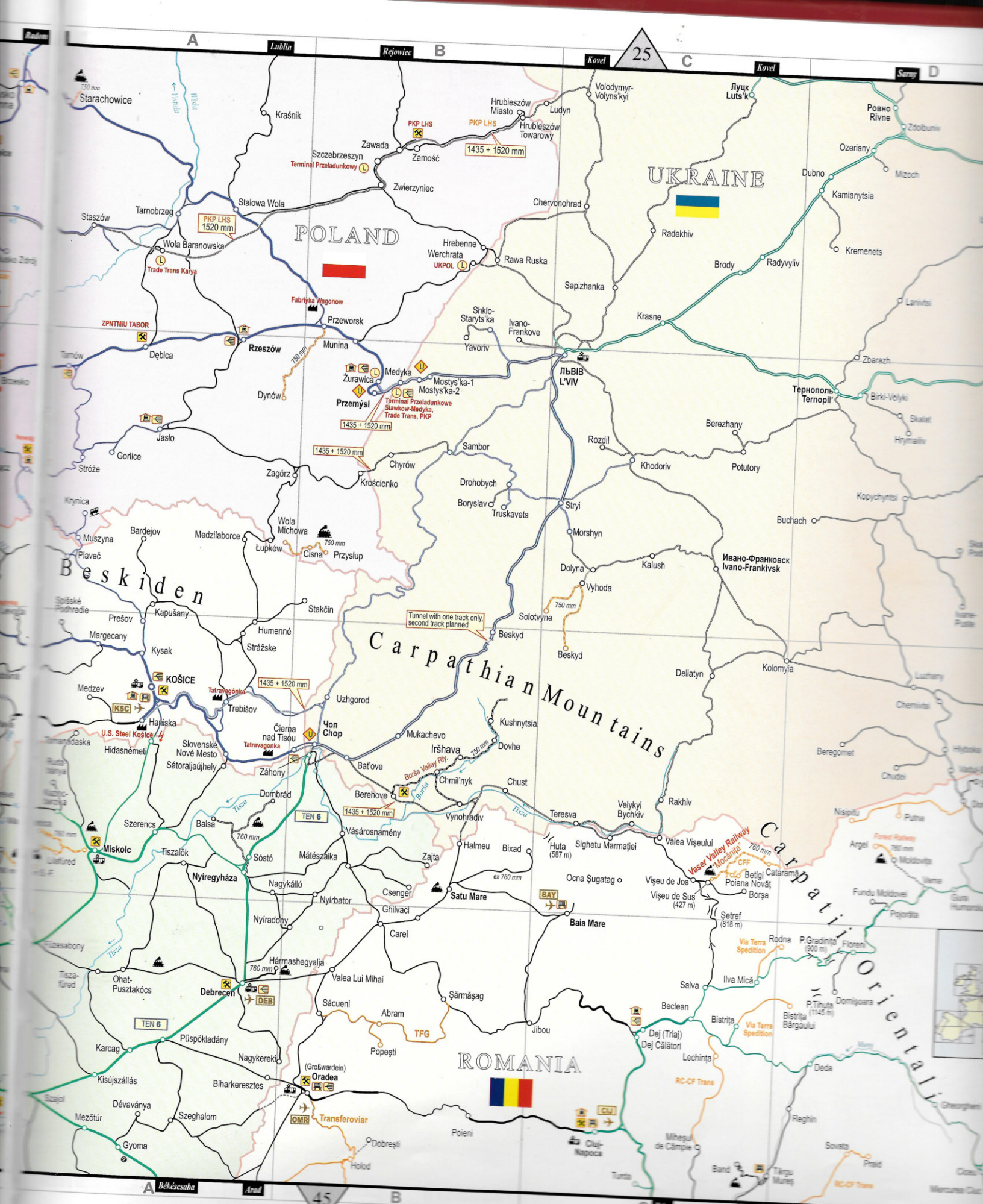


Baltic Sea

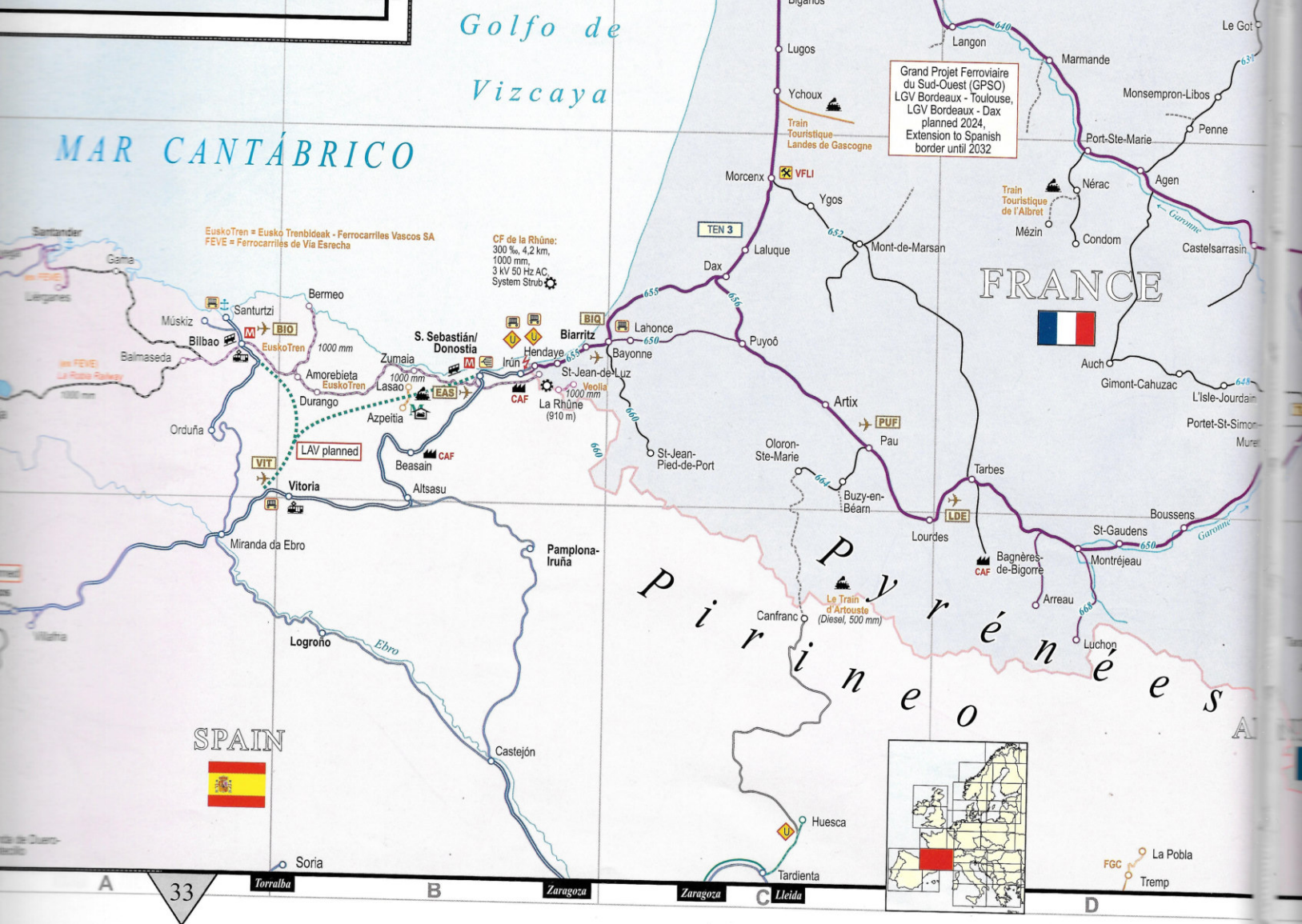
















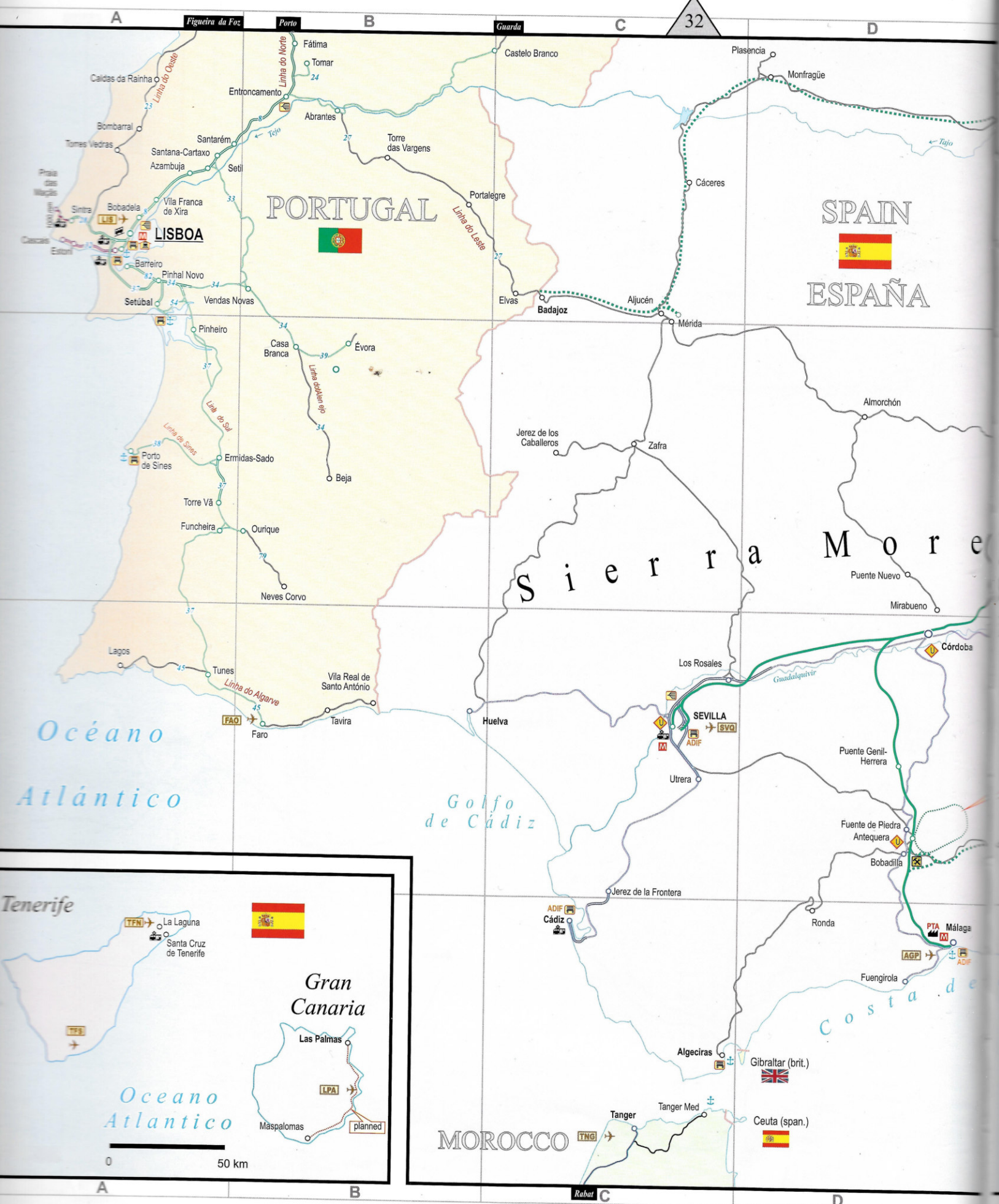
Electrification of the Linha do Minho in preparation/ under construction from 2013

Extension of double track to Vigo under construction until ca. 2016

LAV under construction until ca. 2016

LAV in preparation/ under construction for 2014 (Pajares Tunnel 24.6 km long)











Manresa Baixador A B C D La Tor de Querol Perpignan

36

Zaragoza Tarragona

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36

SPAIN
ESPAÑA



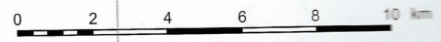
Mediterranean Sea
Mar Mediterráneo

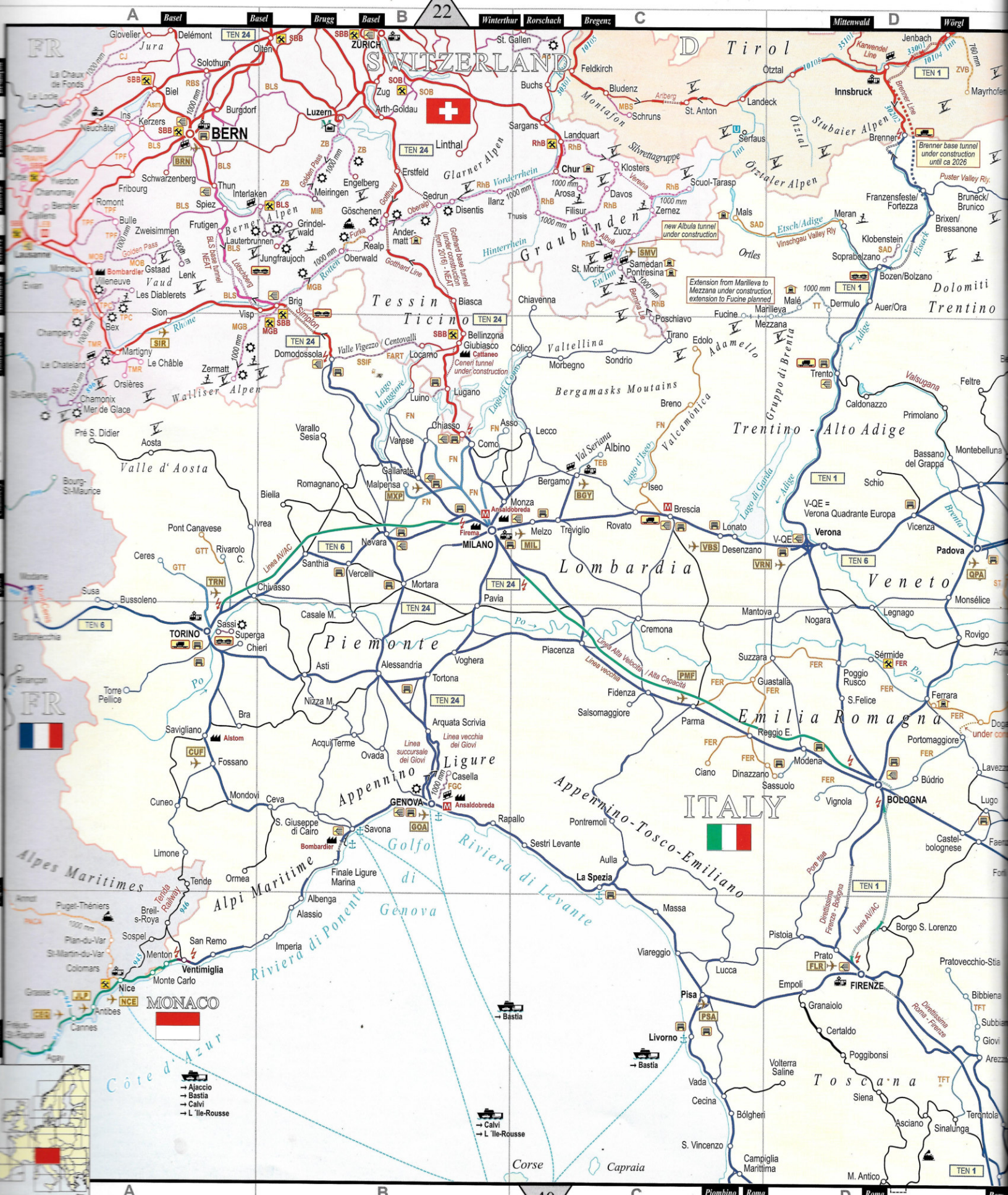
BARCELONA

TMB not shown

KEY

- double track line, 1435 mm, 25 kV AC, ADIF/RENFE
- double track line, 1435 mm + 1668 mm, 3 kV DC, ADIF/RENFE
- double track line, 1668 mm, 3 kV DC, ADIF/RENFE
- single track line, 1668 mm, 3 kV DC, ADIF/RENFE
- single track line, 1668 mm, goods traffic, ADIF/RENFE not electrified
- double track line, 1435 mm, 1.5 kV DC FGC, in the urban area mostly underground. The FGC also operates 3 Metro lines in Barcelona (L6, L7, L8)
- double track line, 1000 mm, 1.5 kV DC, FGC
- single track line, 1000 mm, 1.5 kV DC, FGC
- single track line, 1000 mm, FGC, not electrified, goods traffic only
- single track line, 1000 mm and 1435 or 1668 mm
- tram
- funicular railway
- cable car (teleferic)
- works
- container terminal
- depot
- change of voltage, e.g. 3 kV DC / 25 kV AC 50 Hz







- SLB = Salzburger Lokalbahn
- SRB = Südburgenländische Regionalbahn GmbH
- SLB = Steiermärkische Landesbahn
- ZVB = Zillertaler Verkehrsbetriebe AG
- GySEV = Győr-Sopron-Ebenfurti Vasút Zrt
- FER = Ferrovie Emilia Romagna Srl
- FUC = Ferrovie Udine Cividale Srl
- TFT = Trasporto Ferroviario Toscano SpA
- UM = Umbria Mobilità (ex FCU)





A

39

B

Rijeka

Martin Brod

C

45

Doboj

D

BOSNIA and HERZEGOVINA

CROATIA



Mare Adriatico

Puglia

Campania

Basilicata

Mare Ionico

- Dubrovnik (HR)
- Durres (AL)
- Igoumenitsa (GR)
- Kerkira (GR)
- Patra (GR)

Electrification of the FSE line Bari - Putignano - Taranto for ca. 2017

- Igoumenitsa (GR)
- Kerkira (GR)
- Patra (GR)

43

A

B

C

D



CV	= Circumvesuviana Srl
FAL	= Ferrovie Appulo - Lucane Srl
FdC	= Ferrovie della Calabria Srl
FCE	= Ferrovia Circumetnea
FdS	= Arst Gestione FdS Srl (Ferrovie della Sardegna)
FSE	= Ferrovie del Sud Est e Servizi Automobilistici Srl
FT	= Ferrotramviaria SpA
MCNE	= MetroCampania NordEst Srl

Mare Tirreno



TUNISIA

TUNIS

Pantelleria





The Šargan Eight - an international heritage railway

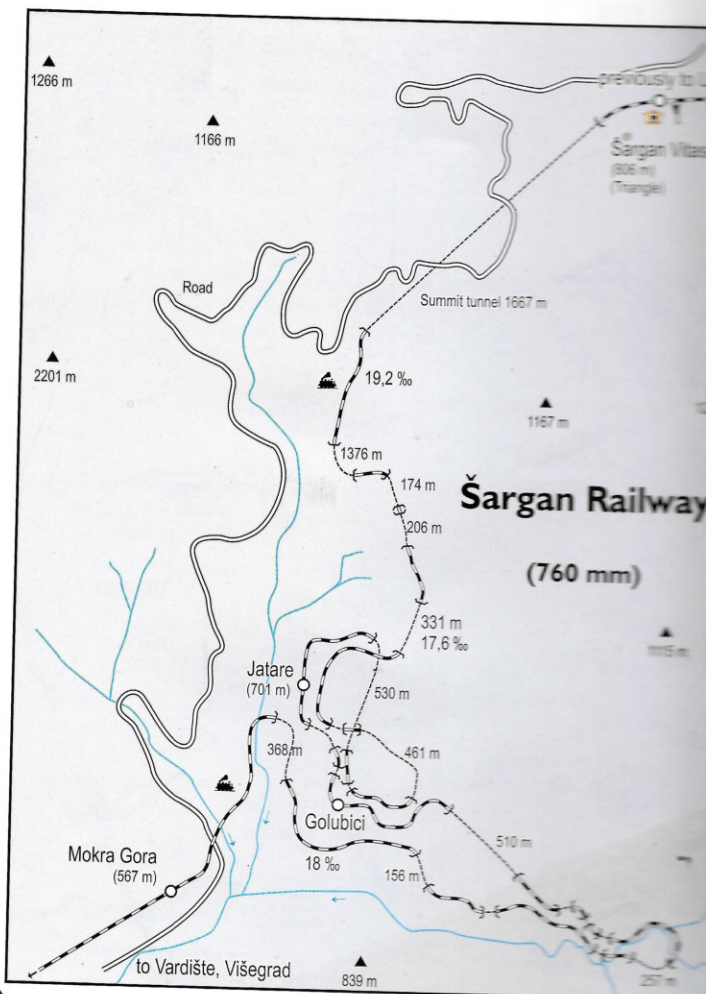
The Šargan Vitas - Mokra Gora - Višegrad railway line, rebuilt from 1999, was part of the former Dubrovnik - Mostar - Sarajevo - Belgrade narrow gauge railway line in western Serbia. The 57 km-long route was completed only in 1928 and connected the Sarajevo-Vardište Bosnian Eastern Railway, coming from Sarajevo, with Užice (formerly Titovo Užice) in Serbia.

The Kingdom of Serbs, Croats and Slovenes formed at the end of World War I pursued a number of projects to connect the individual narrow-gauge railways in Serbia with each other and with Sarajevo and the Adriatic Sea. The mountain route over Šargan pass was at the heart of long-distance routes in Yugoslavia. In addition to the express trains on the approximately 400 km long route connecting Belgrade to Sarajevo, there were through trains to Dubrovnik with dining and lounge cars as well as goods traffic from the area around Belgrade to the Adriatic.

After World War 2, new lines were built to standard gauge in Yugoslavia, including a faster northern Belgrade-Sarajevo connection. Part of the narrow gauge line at Užice was used for the connection of the new standard gauge line from Belgrade to the Adriatic port of Bar. To the west of Užice, a reservoir was created in the valley, submerging the route of the narrow gauge railway. The narrow gauge railway at the Šargan pass was finally decommissioned and dismantled in 1974.

In 1999 the Serbian Ministry of Tourism proposed the development of tourism in the Tara National Park (founded in 1981), including the rebuilt narrow gauge railway. In 2001, the first section was finished and train service began in 2003. And in 2010 the route was constructed over the border to Višegrad in Bosnia, making it one of the few international heritage railways.

A further extension to Kremna is under construction and there are plans to connect the railway with a new line to the Belgrade-Bar main line.











BULGARIA



TURKEY



TURKEY



Black
Sea

Sea of Marmara

Aegean
Sea

Marmaray Project: 13.6 km long tunnel under the Bosphorus, 56 m beneath sea level, opened in 2013

new line to the port of Kavala planned



ALBANIA



GREECE



EPIRUS

THESSALY

Othrys

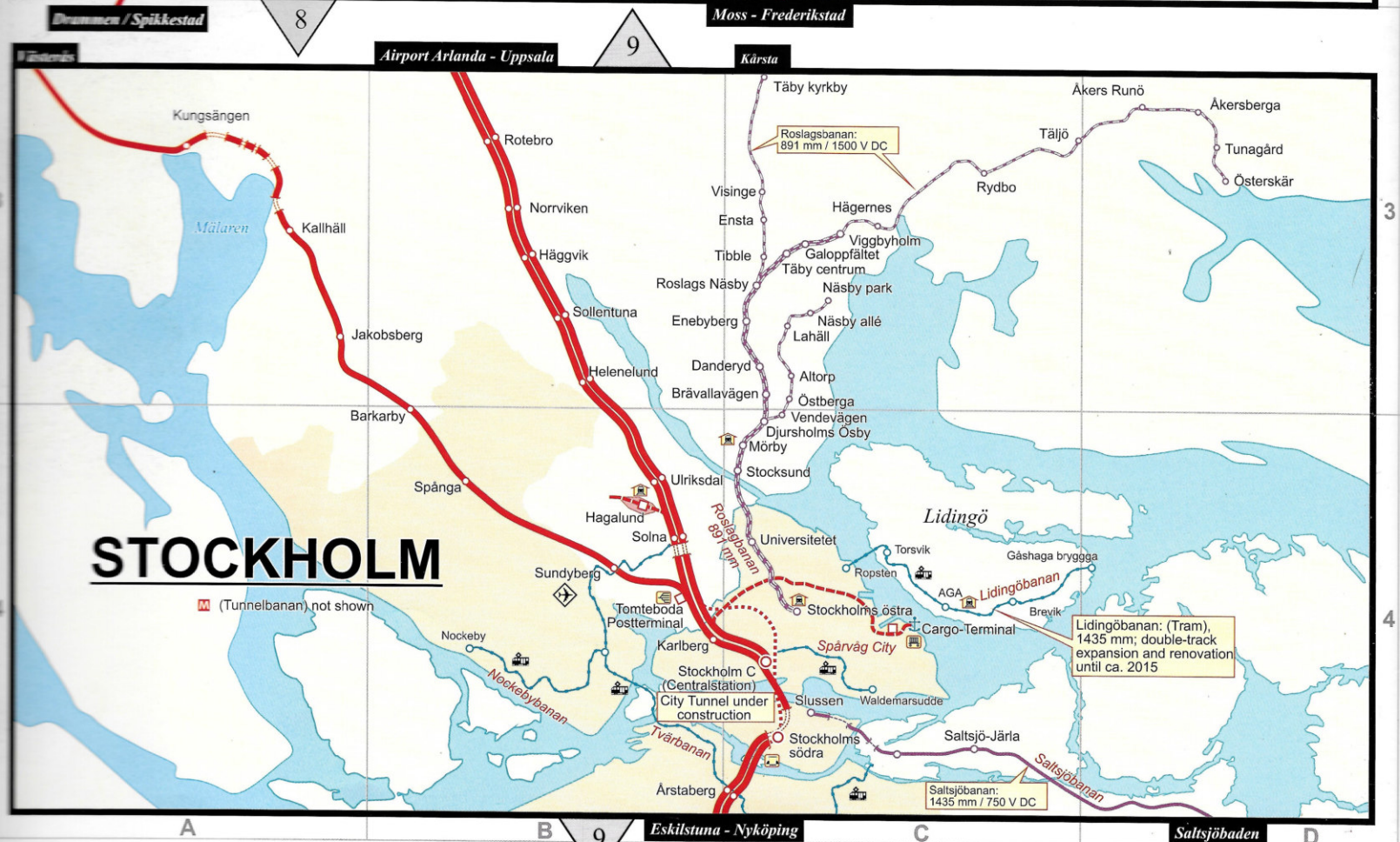
Kalidromo

Parnassos

PELOPONNESE

*Ionian
Sea*





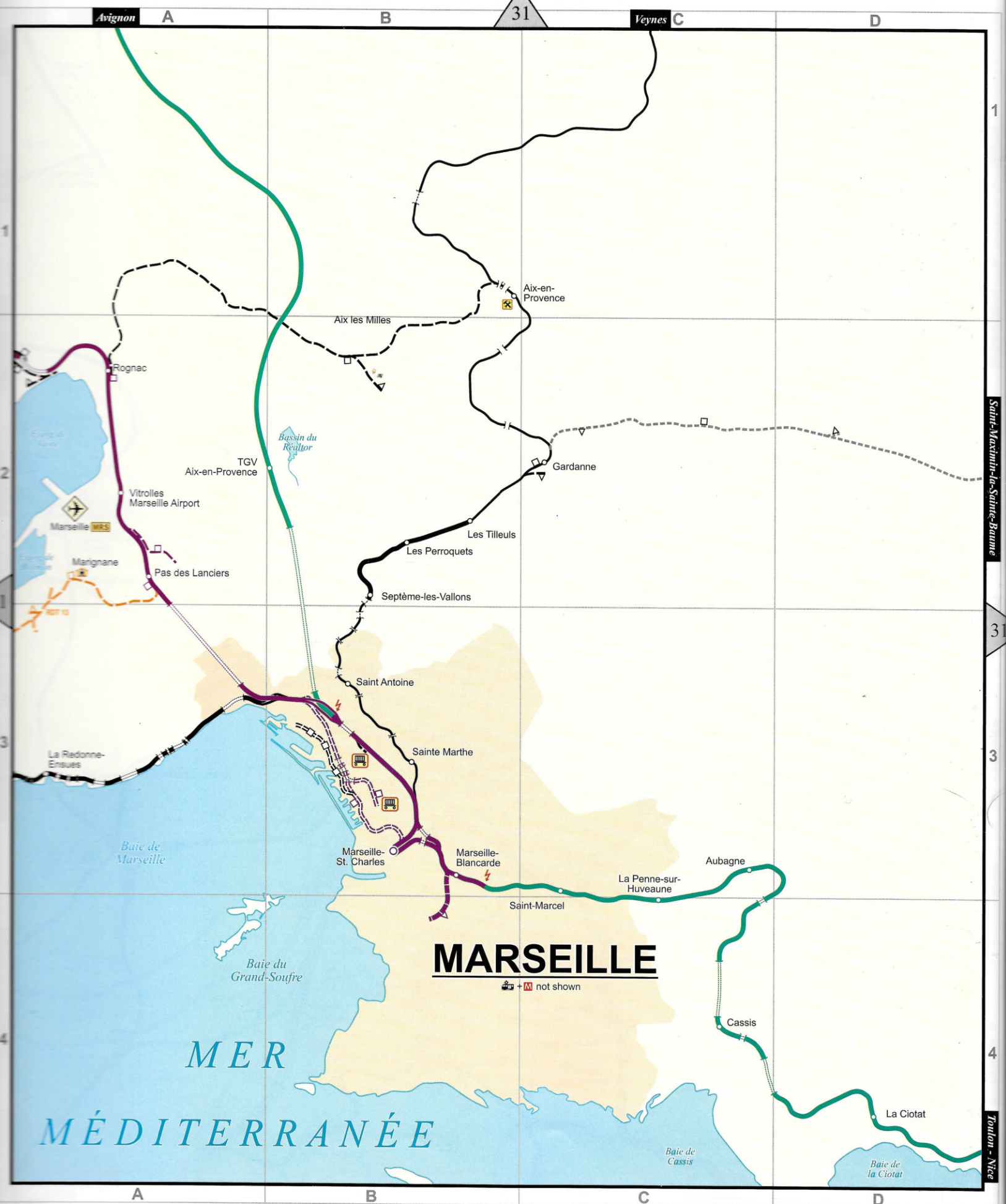
Øresund Bridge
S: Öresundsbron
DK: Øresundsbroen
(7,845m)

Malmö Syd
Svågertorp









A

Valladolid

33

C

D

Norte María de la Alameda

1

2

3

4

5



Torrijos

A

33

Toledo

B

Avila

C

D

Oceano
Atlântico

1

2

3

4

Oceano
Atlântico

LISBON LISBOA

900 mm + M not shown

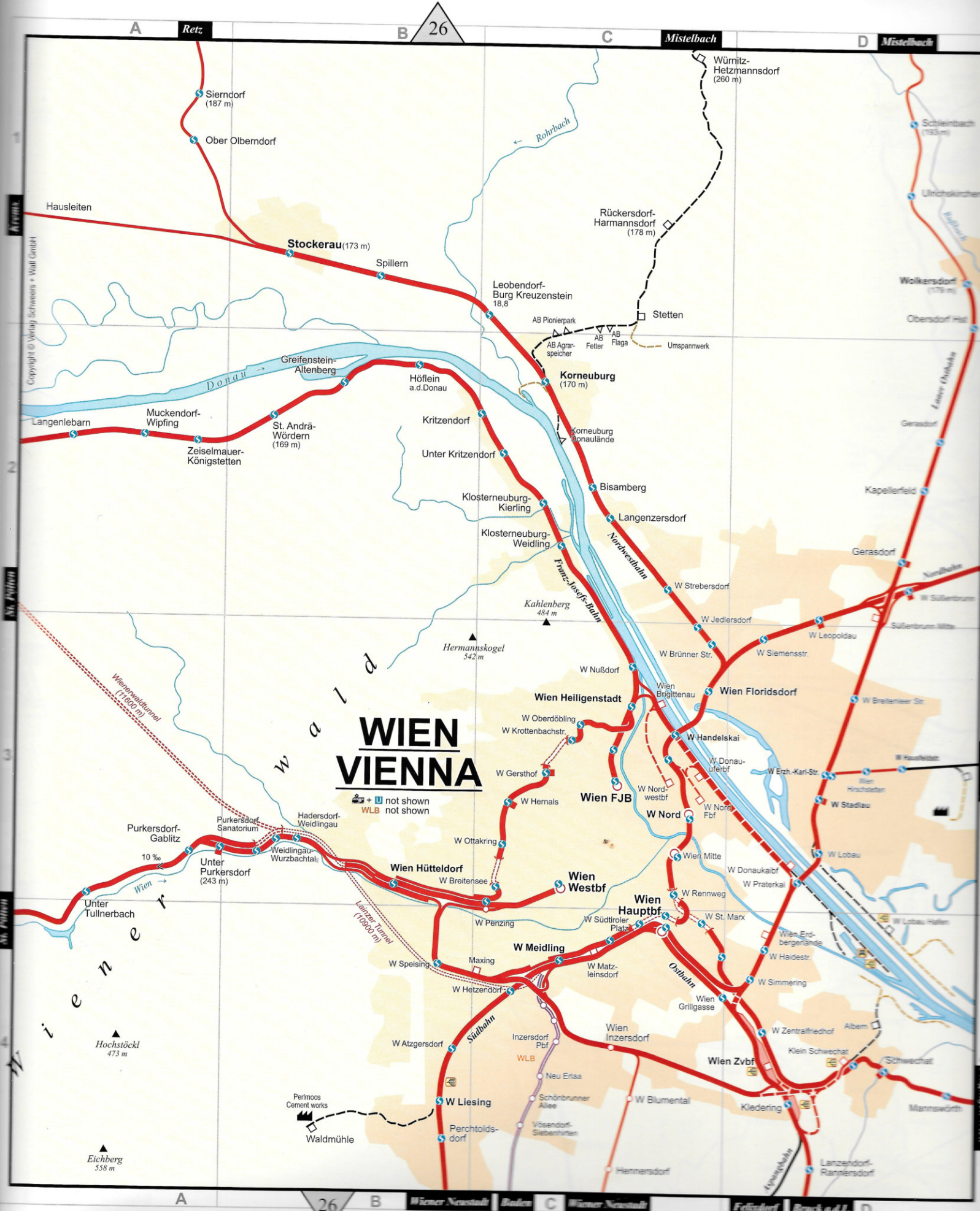


Aeroporto

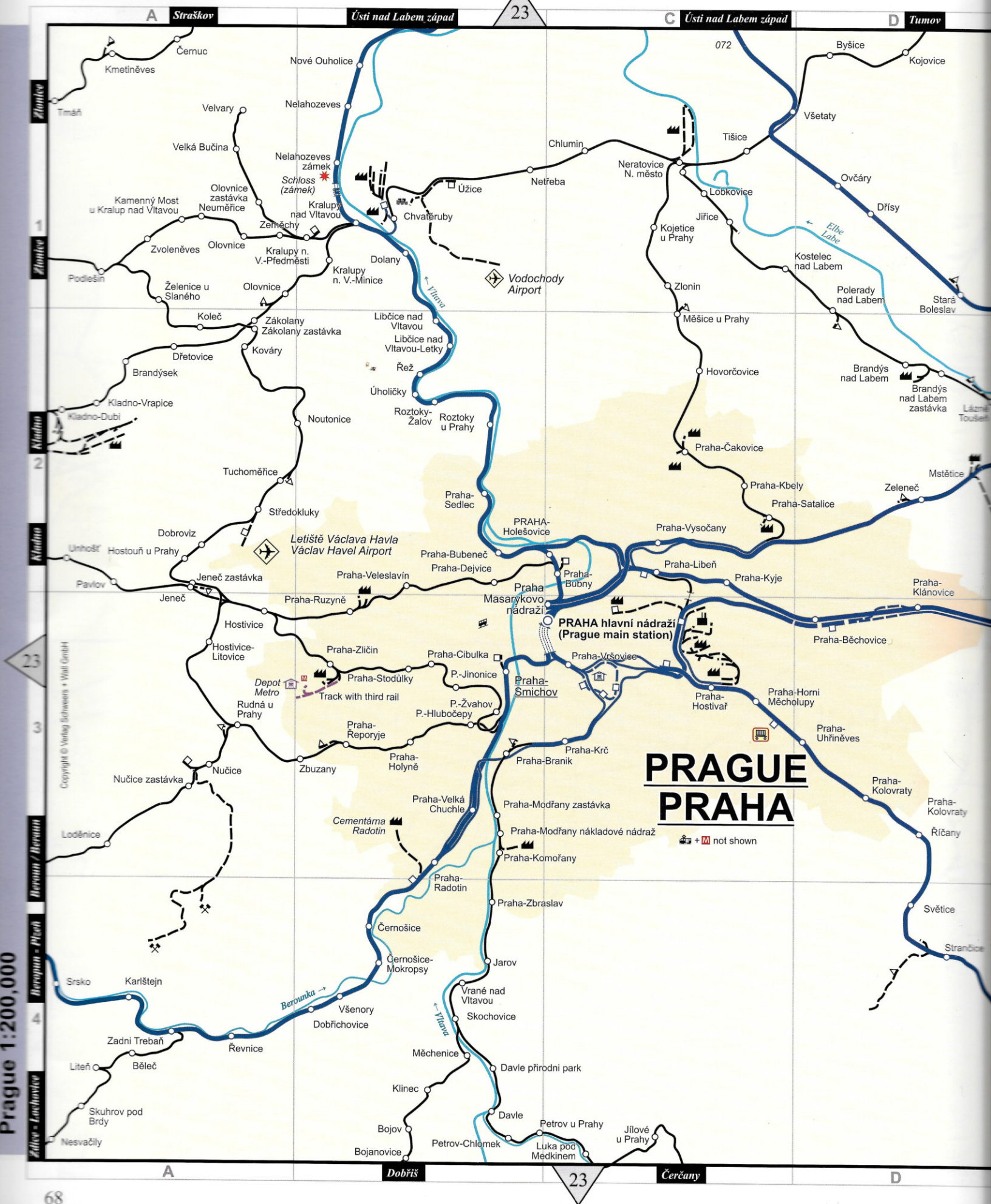
LISBOA Oriente

LISBOA
Santa Apolónia









PRAGUE PRAHA

not shown

A

B

44

Vác - Bratislava

C

Vác

D

Balassagyarmat

Pázmáneum

2

1

Győr - Wien

3

Nagybajcs

Pusztaszabolcs

A

B Kiskunhalas

44

C

Ecsény

D

Pázmáneum

Pilisvörösvár

Solymár

Üröm

Óbuda

Aquincum

Újpest

Hűvösvölgy

Gyermekvasút
(children's railway)BUDAPEST-
NYUGATI (West stn.)BUDAPEST-
DÉLI (South stn.)BUDAPEST-
KELETI (East stn.)Budapest-
Ferencvárosi

Budaörs

Budapest-
KelenföldBudapest-
SoroksáriPesterzsébet
(Freight stn.)

Pesterzsébet

Budafok-
Albertfalva

Érdliget

Érd-Alsó

Nagytétény

Tétényliget

Tárnok

Százhalombatta

Dunaharaszti

Taksony

Rákosrendező

Kőbánya
alsó

Rákos

Kőbánya-Kispest

Pestszentlőrinc

Kispest

Fényágyu

Ferihegy
(Terminal 1)

Pestszentimre

Vescsés

Vescsés-
Kertekalja

Ulló

Felsőpakonyi

Ócsa

Dunakeszi-
gyártelep

Dunakeszi

Dunakeszi
alsó

Fót

Fótújfalu

Csomád

Veresegyház

Szivacs

Erdőkertes

Göd

Felsőgod

Szöd -
Szödliget

Vácrátót

Vác

Váchrátót

Váchrátót

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Váchrátót

BUDAPEST

not shown

Rákoscsaba

Rákosliget

Rákoscsaba-
Újtelep

Rákoshegy

Pestszentlőrinc

Kispest

Fényágyu

Ferihegy
(Terminal 1)

Pestszentimre

Vescsés

Vescsés-
Kertekalja

Ulló

Felsőpakonyi

Ócsa

Dunakeszi-
gyártelep

Dunakeszi

Dunakeszi
alsó

Fót

Fótújfalu

Csomád

Veresegyház

Szivacs

Erdőkertes

Váchrátót

Gödöllő

Ménfőcsanak

Isaszeg

Pécel

Maglód

Gyömrő

Tápiószecső

Tápiószőlős

Tápiószőlős

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BUCUREȘTI BUCHAREST

not shown

**BUCUREȘTI
GARA de NORD**

Line out of service since
2005 due to collapse of
Argeș Bridge at
Grădiște

